

But without being acquainted with the cranial, dental, or other characters, it would seem to me premature to offer an opinion as to its generic relations, or even to give to it a distinct generic term, much as the shape of the horns differs from that of all other known Antelopes. It therefore seems to me to be sufficient to distinguish it for the present as a species of *Antilope* in the Cuvierian sense, viz. as *Antilope triangularis*.

5. Note on a Bornean Porcupine, *Trichys lipura*.

By Dr. A. GÜNTHER, F.R.S., F.Z.S.

[Received February 18, 1889.]

In the 'Proceedings' of this Society for 1876, p. 739, I described a small species of Porcupine from the west coast of Borneo under the name of *Trichys lipura*.

The genus established for this Porcupine was characterized by the absence or rudimentary condition of a tail and by the form of its skull. The former character proves to be spurious, perhaps due to mutilation, and has to be abandoned; whilst the latter suffices by itself to generically separate this Porcupine from *Atherura*.

Since the publication of that paper the British Museum has received two other specimens: one, a female, obtained by Mr. C. Hose at Baram, Sarawak¹, again, does not show the trace of a tail; whilst the other, of which the skin as well as the skeleton are preserved, and which was found by Mr. A. Everett near the Batang Kubar River in Sarawak, possesses a long and slender tail.

Thus, of two specimens examined by Gervais (Voy. Bonite, Mamm. p. 60), and of three specimens which have come under my notice, three were tailless, and only two provided with this appendage. This fact, combined with Mr. Low's statement that the natives had assured him that this Porcupine was tailless, seems clearly to prove that the loss or absence of the tail is of very frequent occurrence; and to judge from the condition of the integuments, I am inclined to believe that the tail is lost shortly after birth, if, indeed, its absence is not congenital².

However, the discovery that *Trichys lipura* is normally provided with a tail has induced me to reexamine the literature in order to ascertain whether tailed specimens of this Porcupine had been noticed by previous authors. And there is no doubt that Waterhouse (see Nat. Hist. Mammal. vol. ii. p. 470) had examined four specimens of it, or, at least, of a closely allied species³, in the Leyden Museum.

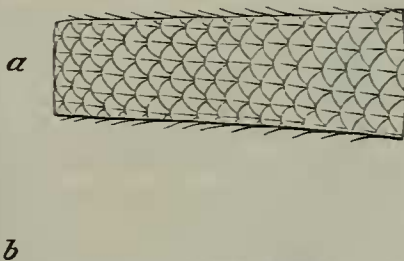
¹ Mr. Hose says that the native name is "*Ankis*."

² I, therefore, see no reason why the specific term "*lipura*" should not have the same claim to being retained as those of *Paradisea apoda*, *Cypselus apus*, &c.

³ He says that the specimens in the Leyden Museum are from *Siam*.

He, however, referred them to *Atherura fasciculata* of Buffon and Shaw, which is a Porcupine with *long* spines of a different coloration and with a thick bundle of terminal quills at the end of the tail, and, probably, identical with *Atherura macrura*. Waterhouse describes distinctly the *short* spines of our Porcupine and the peculiar form of the terminal tail-quills; and when he mentions the rhombic scales of the tail as provided with a median "ridge," he clearly describes the *appearance* of the short hair which starts from the base of each scale and is closely adpressed to its median line.

To supplement my first account of *Trichys lipura*, I proceed now to describe the tail of a full-grown specimen, of which the skin measures about 15 inches without tail. The tail is long ($8\frac{1}{2}$ inches) and slender, longer than one half of the body and head, covered with spines for about one inch of its basal portion. Nearly in the whole of its length it is covered with rhombic scales of relatively large size (fig. *a*), and arranged regularly in oblique series or rings. A short fine hair, which is never spinous as in *Atherura macrura*,



a. Portion of the tail of *Trichys lipura*, showing the arrangement of the scutes and hairs. *b.* One of the terminal caudal bristles.

starts from the base of each scale and lies closely adpressed to its median line, giving to the scale the appearance of being keeled (like the scale of a snake) as mentioned already. Towards the end of the tail the hairs become longer, and the terminal quills (fig. *b*) are much elongate, 2-3 inches long, and compressed with a shallow groove, like blades of grass, only much narrower, and form a thin bundle. The majority are truncate at their extremity and hollow. These quills, therefore, differ much in shape from those of *Atherura*, and are, in fact, a less developed form of the caudal quills of other Porcupines. They are unfit for producing the rattling or quivering noise which the more highly specialized forms of Porcupine make under the influence of fear or anger¹.

¹ Morphologically as well as physiologically the terminal tuft of quills on the tail of Porcupines reminds us of the rattle of Rattlesnakes.

With the evidence now before us there is no longer ¹ any reason to doubt that the skeleton described by Gervais really belongs to *Trichys*. He gives as the numbers of vertebræ:—D. 16, L. 5, S. 4, C. 21, whilst I find in our skeleton D. 16, L. 6, S. 3, C. 24. The caudal vertebral column bears four compressed, hatchet-shaped chevron-bones between the fourth and eight caudal vertebræ. The eighth vertebra marks the boundary between the proximal and distal portions of the caudal series, differing much in shape from the seventh as well as the ninth, and having the transverse process dilated into a broad lamina extending along the whole length of the centrum. The seven vertebræ preceding it are provided with strong and long lamelliform transverse processes, whilst the apophyses rapidly disappear from the ninth vertebra backwards.

P.S.—Through the kindness of Dr. Jentink I have been able to examine one of the specimens described by Waterhouse as *Atherura fasciculata*, and find that I was right in supposing that they are identical with *Trichys*. I have to add that Dr. Jentink adopts now Waterhouse's identification, an opinion which, for reasons stated, I do not share. Dr. Jentink also informs me that the specimens in the Leyden Museum come from Malacca, not from Siam.—*March 11th.*

6. On certain Points in the Anatomy of the Accipitres, with reference to the Affinities of *Polyboroides*. By FRANK E. BEDDARD, M.A., Prosector to the Society.

[Received February 19, 1889.]

I have recently had the opportunity of dissecting a specimen of *Polyboroides* which died in the Society's Gardens; the specimen was deposited by Lord Lilford, who expressed a wish that the skin should go to the British Museum; after the bird was skinned it was still possible to examine into the arrangement of certain of the muscles and of other organs, which examination has, in my opinion, thrown some light upon the affinities of the bird. For this reason I think it worth while to publish the notes of my dissection, although this paper is necessarily very far from containing a complete account of the anatomy of *Polyboroides*.

I have not attempted to give any description of its osteology, which has been lately worked out in detail by Prof. Milne-Edwards², but in a different species, *P. radiatus*. This account shows that the supposed resemblances of *Polyboroides* to *Serpentarius* are purely superficial, and that in reality it comes nearest to the Buzzards. The position assigned to the genus by Sharpe³ (in the subfamily Accipi-

¹ Proc. Zool. Soc. 1876, p. 712.

² Milne-Edwards and Grandidier, Hist. phys. nat. et polit. de Madagascar: Oiseaux, tom. i. p. 50.

³ B. M. Catalogue of Birds, vol. i. p. 47.